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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/802,014

03/16/2004

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08/22/2008

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EXAMINER

TRAN, PABLO N

ART UNIT

PAPER NUMBER

2618

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/802,014	Applicant(s) ROUFOOGARAN ET AL.	
	Examiner Pablo N. Tran	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 3-5, 7-15, 18-20 and 22-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 6, 16 and 21 is/are rejected.
- 7) ☒ Claim(s) 2, 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 6, 16, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Macnally et al. (herein after "Macnally", US Pat. No. 7,065,327) in view of Candal (US Pat. No. 2005/0195113).

As per claims 1 and 16, Macnally et al. disclose a radio frequency integrated circuit (fig. 1, col. 2/ln. 20-21) comprising a radio front end (fig. 1) operable coupled to transceiver radio frequency signals; a low noise amplifier (fig. 1/item LNA, col. 3/ln. 30-57) operable coupled to the radio front end, wherein the low noise amplifier receives inbound RF signals from the radio front end, and wherein the low noise amplifier amplifies the inbound RF signals to produce amplified inbound RF signals; down conversion module (fig. 1, col. 3/ln. 30-57) operable coupled to convert the amplified inbound RF signals into inbound baseband signals; baseband processing module (fig. 1, col. 3/ln. 30-57) operable coupled to convert the inbound baseband signals into inbound data and to convert outbound data into outbound baseband signals in accordance with a wireless communications protocol; up conversion module (fig. 1, col.

3/ln. 30-57) operable coupled to convert the outbound baseband signals into outbound RF signals; and a power amplifier (fig. 1/item PA, col. 3/ln. 30-57) operable coupled to amplify the outbound RF signals to produce amplified outbound RF signals and to provide the amplified outbound RF signals to the radio front end. Macnally et al. further disclose the radio front end includes a transformer (fig. 1, col. 5/ln. 12) having a first winding and a second winding, wherein the first winding is operable coupled to an antenna and the second winding coupled to at least one of a power amplifier and a low noise amplifier, and an adjustable load (fig. 1, col. 5/ln. 12-13) operable coupled to the second winding.

Macnally et al. disclose such matching network with a first impedance based on a first impedance selection signal when the radio front end is in a transmit mode and provides a second impedance based on a second impedance selection signal when the radio front end is in a receive mode but not specifically such that impedance at the first winding is substantially similar in the transmit mode and in the receive mode. However, Candal suggested such matching network configuration [0023]. Therefore, it would have been obvious to one of ordinary skill in the art for Macnally et al. to utilize such matching network configuration, as taught by Candal, in order to improve transmission signals while optimized power consumption effectively.

As per claims 6 and 21, the modified communication apparatus of Macnally et al. and Candal. further disclose determining the load impedance selection signal based on at least one of impedance matching of load on single-ending winding, output power requirements, or receiver sensitivity (see Macnally et al., col. 6/ln. 48-col. 7/ln. 57).

Allowable Subject Matter

3. Claims 2 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

4. Applicant's arguments filed 05/27/08 have been fully considered but they are not persuasive.

The Applicant's stated that "the references fail to suggests an adjustable load operably coupled to the second winding, wherein the adjustable load provides a first impedance based on a first impedance selection signal when the radio front end is in a transmit mode and provides a second impedance based on a second impedance selection signal when the radio front end is in a receive mode such that impedance at the first winding is substantially similar in the transmit mode and in the receive mode". In response to the Applicant, Macnally discloses a balun (col. 5/ln. 12) having a first winding and a second winding. The second winding is connected to a RF matching network (col. 5/ln. 12-13). Macnally disclose that the RF matching network is designed to provide a matching impedance (50 ohms), in transmit or receive mode, to match the impedance of the first winding (antenna impedance (50 ohms), col. 6/ln. 37-56). Therefore, the rejection is proper.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pablo Tran whose telephone number is (571)272-7898. The examiner normal hours are 9:30 -5:00 (Monday-Friday). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (571)272-7899. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) System. Status information for Published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-directauspto.gov>. Should

You have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (in USA or CANADA) or 571-272-1000.

August 20, 2008

/Pablo N Tran/

Primary Examiner, Art Unit 2618